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SECTION 270.00 – MINIMUM TESTING REQUIREMENTS

The following tables outline the minimum testing and acceptance requirements for materials incorporated into ITD construction projects and are a part of the ITD Quality Assurance Program. The tables apply to the sampling and testing of material characteristics not specified as accepted by statistical procedures. For material characteristics accepted by statistical procedures, the acceptance requirements are included in Table 106.03-1 of the Quality Assurance (QA) Special Provision. On projects containing the QA Special Provision (QC/QA projects), the minimum testing requirements outlined herein apply for all material characteristics not included in Table 106.03-1 of the QA Special Provision.

The requirements outlined herein are the established minimum acceptance requirements for materials used in standard applications and paid for under standard bid items. For special provision items, material used in non-standard, non-roadway or temporary applications or small quantities of materials alternative materials acceptance requirements will be determined as discussed herein or as specified in the contract documents.

Minimum testing frequencies are included in the tables. These frequencies may be reduced by change order with the concurrence of the District Materials Engineer and HQ Materials Engineer for materials with a history of uniform test results and exhibiting good quality material. The Engineer may elect to increase testing frequency at any time. Testing frequency should be increased when accepting material from newly developed sources or those with a wide range of results.

270.01 Content of the MTR Tables. The MTR tables are organized by Standard Specification Section. For each material listed, the testing and acceptance requirements are included. The tables also include ITD specification references and test methods. The tables indicate who is responsible for sampling and testing for each material. The required report form numbers columns include forms related to materials acceptance that are the responsibility of the project personnel. Some reports generated as a result of HQ testing are included and indicated as a Lab Report.

The *minimum required frequency* columns list the maximum quantity, and fractions of a quantity of material that can be represented by a single test. For example, a frequency of “Each 500 m³” for gradation indicates that there must be one gradation test located within each 500 cubic meters of material accepted. Testing for each item and material must be distributed throughout the project to represent the total quantity of material accepted.

There are three types of testing listed in the *purpose of testing* columns: Acceptance, Verification and Independent Assurance. Acceptance of material is by one or a combination of the following as indicated in the MTR tables:

- acceptance testing performed by the State
- certification
- certification with quality control or other test results provided by the supplier or manufacturer
- pretesting by the State
- inspection by the State and
- laboratory testing by the State

For some materials, verification testing is indicated and is in addition to materials acceptance. Verification testing is typically performed by the HQ Materials laboratory and is used to verify manufacturer’s certifications.

Independent assurance requirements are also included in the tables. The Independent Assurance Program is described in detail in [Section 300.00](#).

The *remarks, notes or additional directions* columns of the tables specify the location of acceptance, references to sections of the manual, small quantity exceptions, and other notes and remarks as applicable.

270.02 Source Approval. Materials source approval requirements and associated quality testing, such as Idaho Degradation, LA Abrasion and Ethylene Glycol testing, are not included in the tables. All fill and aggregate materials imported from off the project must be obtained from approved materials sources. [Section 265.00](#) provides an overview of the materials source approval process.

270.03 Obviously Defective Material. Based on inspection and without regard for testing frequency, the Engineer may isolate and reject obviously defective material.

270.04 Acceptance Of Small Quantities. The Department may accept small quantities of certain materials without sampling and testing. The determination to accept materials using this provision rests solely with the Department. The Department may elect to sample and test small quantities at any time. The following materials, regardless of quantity, are not eligible for small quantity acceptance:

- Materials that are accepted by manufacturer's certification. Manufacturer's certifications must be provided for all quantities of material accepted by certification.
- Concrete with a specified strength of greater than 3000 psi.
- Paving on the NHS with divided highways, including median crossovers.

Material can be accepted as a small quantity if the estimated plan quantity is less than the minimum testing frequency. The following minimum requirements must be met and documented when using small quantity acceptance:

- Aggregates must be obtained from approved materials sources.
- A mix design must be submitted, reviewed and approved by the Engineer prior to use for plant mix pavement and concrete items.
- Visual inspection of the materials during installation, placement or compaction.
- For small quantities of traveled way paving, intersection paving or paving at intersection radiuses, cores are required in accordance with [Standard Specification 405.03J](#) for in-place density acceptance.

The basis for acceptance of the material must be documented. Documentation will be by file memo, will be included in the daily diary or will be on field or test reports. A brief statement summarizing the basis for acceptance must be included in the Materials Summary Report submitted at the end of the project. Examples of basis for small quantity acceptance are as follows:

- Satisfactory test results on the same material from a recent or concurrent project.
- Visual inspection of the materials and installation.
- Material Certification ([ITD-851](#)) with supporting QC or manufacturer's test results where applicable.
- The use of sufficient compaction effort and equipment, as determined by the Engineer. (Small quantity pavement applications that do not require cores for in-place density acceptance include small patches, utility repairs, and pavement placed outside the traveled way.)

Sampling and laboratory verification testing may be waived for the following items when the quantity of material is equal to or less than that indicated below:

Asphalt (Emulsified)	2000 gallons; 7600 liters (8 tons)
Asphalt (PG Binder)	22 Tons (20 t)
Cement, Lime, Fly ash	40 cubic yards of concrete placed
Geotextiles	600 square yards (500 square meters)

270.05 Non-standard Acceptance of Materials. Acceptance requirements will be determined on a case by case basis for the following regardless of the quantity:

- material not permanently incorporated into the project (temporary detours, etc.),
- when sampling and testing per the standard requirements is not applicable due to the application or use of the material,
- when sampling and testing per the standard requirements is not applicable due to the sequence of placement

Some examples of non-standard applications are:

- driveways
- field approaches
- mailbox turnouts
- asphaltic ditches and slopes
- material behind guardrail and for guardrail terminals
- asphaltic sidewalk and curb

The Engineer, in consultation with the District Materials Engineer, will develop a written acceptance plan that identifies the non-standard acceptance criteria prior to incorporating the material.

For numerous fractions of an item, such as short pipe extensions, where the required minimum frequency of testing is not practical, a written acceptance plan can be submitted to the HQ Materials Engineer for approval to replace some of the testing with visual inspection. The plan must be approved prior to incorporating the material.

The minimum requirements listed for small quantities (Section 270.04) must be met (i.e. approved sources, mix designs approval, inspection and cores for mainline and intersection paving). The documentation requirements for materials acceptance will be the same as those outlined for small quantity acceptance.

270.06 Special Provision Items. A Special Provision pay item may include multiple different materials, all of which require acceptance. When the materials acceptance requirements for a special provision item are not included in the contract the acceptance requirements for each material incorporated will be determined based on the following criteria:

- When the material is included in the MTR tables and is being used in a standard application, the MTR table acceptance requirements will be used.
- When the material is not included in the MTR tables or is not being used in a standard application, acceptance requirements will be determined by the Engineer, in consultation with the District Materials Engineer.
- When the material is required by the contract to meet a given specification, such as an ASTM or AASHTO specification, at minimum, acceptance of material will require a manufacturer's certification in accordance with [Section 230.00](#).

A brief statement summarizing the basis for acceptance must be included in the Materials Summary Report submitted at the end of the project.

270.07 Change Order Items. A Change Order can include material to be paid for under standard pay items or can establish nonstandard pay items. For standard pay items, the MTR tables will apply.

Acceptance requirements for nonstandard items will be determined based on the following criteria:

- When the material is included in the MTR tables and is being used in a standard application, the MTR table acceptance requirements will be used. This would include a change order that is paid by lump sum and includes materials covered in the MTR tables.
- When the material is not included in the MTR tables or is not being used in a standard application, acceptance requirements will be determined by the Engineer, in consultation with the District Materials Engineer.
- When the material is required by the change order or by reference to meet a given specification, such as an ASTM or AASHTO specification, at minimum, acceptance of material will require a manufacturer's certification in accordance with [Section 230.00](#).

A brief statement summarizing the basis for acceptance must be included in the Materials Summary Report submitted at the end of the project.